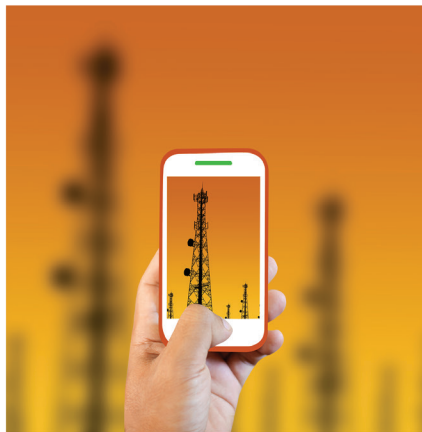


Keysight Technologies

Anite SAS Interoperability Test Solution



Accelerate the Introduction of New Mobile Devices

Today's mobile device users expect a superior experience – both in terms of functionality and quality of voice and data transfer. Rigorous device testing in the integration, interoperability and carrier acceptance testing phases enable mobile operators and device manufacturers to ensure that a device works as intended on the network.

SAS supports the largest number of tests for Tier 1 mobile operators' device acceptance programs

Testing devices in the laboratory is a cost-effective, controllable, repeatable and automated methodology. It allows you to test unexpected behavior in a controlled environment and launch new devices in a much shorter timescale. SAS also enables you to meet end-users' expectations in terms of Quality of Experience, leading to greater levels of customer retention.

The lab-based interoperability test solution (SAS) from Keysight Technologies supports the largest number of tests for Tier-1 operator device acceptance programs and has been proven to cut device test time by 60% compared to performing similar tests in the field. SAS was the first testing product of its kind on the market for evaluating signal and data performance of new devices, and has remained the solution of choice for the Top-10 device manufacturers and Tier-1 mobile operators. Users prefer SAS because of its simple, intuitive graphical interface and cutting-edge functionalities and test cases.

SAS provides an efficient platform for mobile device evaluation based on the test requirements of major mobile operators, who validate tests supported by SAS as part of their device acceptance programs. Most SAS acceptance tests are developed and maintained by Keysight in the form of script packages. SAS offers the broadest test coverage device acceptance programs for Tier-1 mobile operators including AT&T, Telefónica, T-Mobile (USA), Verizon and China Mobile. Mobile operators use SAS and these scripts to verify that a device complies with their specific specifications in a repeatable and controllable environment.

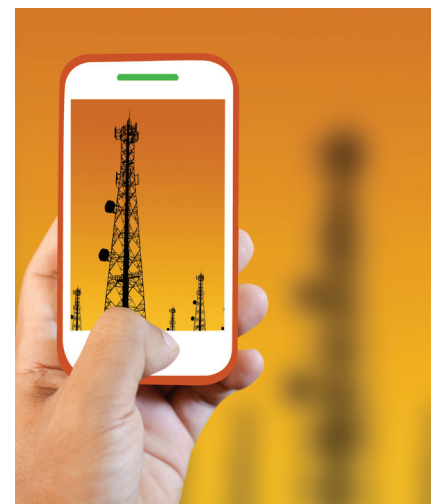
Efficiently test current and future functionality

SAS provides a user-friendly environment to test key functionalities and new features, including those not yet implemented in the network. It also enables you to test 'what if' scenarios, which are tests that cannot be performed in the live network. As a state-of-the-art solution, SAS focuses on the needs of the mobile operator, enabling them to bring in the latest features of LTE and LTE-Advanced. These include Carrier Aggregation of up to five carriers as well as early voice testing of LTE devices using advanced EVS codecs and other VoLTE features.

SAS offers a single testing framework for all major 3GPP technologies (LTE/LTE-A, HSPA+, WCDMA, EGPRS, GPRS and GSM). It is extensively used for both operator-validated LTE/LTE-A FDD/TDD data performance testing and for LTE-focused CDMA2000 and TD-SCDMA inter-technology testing. Its support for LTE-Advanced complies with operator requirements and leads the market with its support of high throughput verification driven by multiple carrier aggregation.

Key benefits of using SAS

- Enhance device quality and end-user experience
- Accelerate evaluation and launches of new devices
- Significantly reduce device verification costs



Intuitive graphical interface speeds up test creation and execution

SAS requires no expert programming knowledge, allowing testing to commence with minimal training. Its intuitive graphical user interface and easy-to-understand control menu options enable you to run tests manually. SAS offers you a wide range of capabilities, making it the platform of choice for development of thousands of mobile operator acceptance scripts. SAS enables you to drive operator tests for IMS, data throughput and various LTE/LTE-A features in a graphical intuitive manner.

SAS includes a number of sample scripts (for testing LTE/LTE-A, UTRAN and GERAN functionality including roaming and inter-technology handover scenarios) that enable you to initiate testing from day one. SAS is a Windows PC-based application and uses the same hardware and software platform, tools and modular structure as Keysight's Development and Conformance Toolsets.

Reduce the need for manual test execution

SAS scripts can be automated by allowing MMI and AT commands to be processed by external applications, such as Keysight's Terminal Automation Gateway (TAG). Flexible and adaptable to your testing needs, SAS can be easily integrated into your automation framework. Keysight's Campaign Manager creates test campaigns and run hundreds of scripts in automatically, which leads to significant cost savings in terms of testing time and resources.

Quickly view message logs and identify critical issues

Real Time Trace displays messages exchanged between the device and the test system in real-time during test execution, enabling you to view test progress and immediately identify issues. The Keysight Log Viewer, with its advanced features such as detailed protocol logging and filtering of different protocol layers, can be used for more detailed analysis of issues.



Versatile LTE Performance Testing for an Improved Quality of Experience

Verify end-user experience with real-life mobility scenarios

Due to the growing number of applications and subscribers, mobile operators are facing signaling overload in their networks, which also has an adverse effect on the battery life of the mobile device. Mobile operators use SAS as a versatile solution to assess the impact of signaling before they launch a new mobile device. SAS also supports tests designed to evaluate the use of AMR voice codecs (an audio data compression scheme) in 3G networks.

SAS offers you the ability to test data performance under fading conditions. The internal fading capability in SAS, easily available as a software upgrade, provides you with a highly competitive platform for comprehensive performance testing that may form part of a mobile operator's acceptance scheme. The data performance of a device is assessed in the lab under simulated real-life conditions (such as MIMO configurations, transmission modes and noise contribution) that affect the mobile user experience.

The SAS data performance analyzer can be used during test execution as well as for post-processing. It provides a graphical display of performance metrics such as data rates at different protocol layers (CQI, MCS, BLER, etc.). A report including the various graphs can be generated

Built-in IMS testing functionality

SAS includes built-in IMS functionality for testing VoLTE and video calls as well as supplementary services using XCAP. These tests can also form part of a mobile operator's acceptance scheme.

Modular platform and flexible licensing

Licenses may be shared across test systems, or even across sites, allowing cost effective use of assets. Keysight's modular product structure allows the test system capabilities to be extended at any point. For example, additional signaling units or other Keysight test solutions, such as Conformance Toolset and Development Toolset, can be easily added to the system at a later date. The modular nature of Keysight's test systems allows them to be broken up into smaller separate systems with fewer cells, or combined together into a single larger test system to run more complex test scenarios.

“SAS has enabled us to reduce the time to get a new device approved by a mobile operator by 60%”

Manager, Carrier Validation,
Top-10 Mobile Device
Manufacturer



N.B. SAS is pronounced as one word: 'Sas'

Evolving

Our unique combination of hardware, software, support, and people can help you reach your next breakthrough. **We are unlocking the future of technology.**



From Hewlett-Packard to Agilent to Keysight



myKeysight

myKeysight
www.keysight.com/find/mykeysight

A personalized view into the information most relevant to you.

Keysight Infoline

Keysight Infoline

www.keysight.com/find/Infoline

Keysight's insight to best in class information management. Free access to your Keysight equipment company reports and e-library.

KEYSIGHT SERVICES

Keysight Services
www.keysight.com/find/service

Our deep offering in design, test, and measurement services deploys an industry-leading array of people, processes, and tools. The result? We help you implement new technologies and engineer improved processes that lower costs.

Keysight Channel Partners

www.keysight.com/find/channelpartners

Get the best of both worlds: Keysight's measurement expertise and product breadth, combined with channel partner convenience.

www.keysight.com/find/anitesas

For more information on Keysight Technologies' products, applications or services, please contact your local Keysight office. The complete list is available at: www.keysight.com/find/contactus

Americas

Canada	(877) 894 4414
Brazil	55 11 3351 7010
Mexico	001 800 254 2440
United States	(800) 829 4444

Asia Pacific

Australia	1 800 629 485
China	800 810 0189
Hong Kong	800 938 693
India	1 800 11 2626
Japan	0120 (421) 345
Korea	080 769 0800
Malaysia	1 800 888 848
Singapore	1 800 375 8100
Taiwan	0800 047 866
Other AP Countries	(65) 6375 8100

Europe & Middle East

Austria	0800 001122
Belgium	0800 58580
Finland	0800 523252
France	0805 980333
Germany	0800 6270999
Ireland	1800 832700
Israel	1 809 343051
Italy	800 599100
Luxembourg	+32 800 58580
Netherlands	0800 0233200
Russia	8800 5009286
Spain	800 000154
Sweden	0200 882255
Switzerland	0800 805353
	Opt. 1 (DE)
	Opt. 2 (FR)
	Opt. 3 (IT)
United Kingdom	0800 0260637

For other unlisted countries:
www.keysight.com/find/contactus
 (BP-06-08-16)

DEKRA Certified
ISO 9001 Quality Management System

www.keysight.com/go/quality
 Keysight Technologies, Inc.
 DEKRA Certified ISO 9001:2015
 Quality Management System